

Comments of the Independent Regulatory Review Commission



Environmental Quality Board Regulation #7-485 (IRRC #3052)

Additional RACT Requirements for Major Sources of NOx and VOCs

July 30, 2014

We submit for your consideration the following comments on the proposed rulemaking published in the April 19, 2014 *Pennsylvania Bulletin*. Our comments are based on criteria in Section 5.2 of the Regulatory Review Act (71 P.S. § 745.5b). Section 5.1(a) of the Regulatory Review Act (71 P.S. § 745.5a(a)) directs the Environmental Quality Board (EQB) to respond to all comments received from us or any other source.

- 1. Revision to the State Implementation Plan – Feasibility; Protection of the public health, safety and welfare; Acceptable data; Reasonableness; Implementation procedures; Economic impact; Clarity.**

Environmental Protection Agency

In the Preamble to the proposed regulation, the EQB explains:

The proposed rulemaking will be submitted to the United States Environmental Protection Agency (EPA) upon final-form publication for approval as a revision to the Commonwealth's State Implementation Plan (SIP).

The Preamble also explains that:

Section 110 of the CAA [Clean Air Act] (42 U.S.C.A. § 7410) gives states primary responsibility for achieving the NAAQS [National Ambient Air Quality Standards]. The principal mechanism at the state level for complying with the CAA is the SIP. A SIP includes the regulatory programs, actions and commitments a state will carry out to implement its responsibilities under the CAA. Once approved by the EPA, a SIP is legally enforceable under both Federal and state law.

In a comment letter dated June 27, 2014, EPA raised the following concerns with the proposed regulation:

- **Emission Limits for Certain Coal-fired Units:** EPA advises the EQB to revise allowable oxides of nitrogen (NOx) emission limits for coal-fired boilers currently equipped with advanced controls, such as selective catalytic reduction, selective non-catalytic

reduction/ammonia injection, for those facilities or units which past actual emissions data show lower limits are certainly technically feasible.

- Other Emission Limits: EPA advises the EQB to reevaluate the proposed presumptive Reasonably Available Control Technology (RACT) emission limits against NO_x emission limits currently in effect in other States as required by EPA's guidance on RACT for the 1997 and 2008 ozone NAAQS.
- Cost-Effectiveness: EPA advises the EQB to reevaluate the proposed RACT limits by revising upward the cost effectiveness range to characterize RACT economic reasonableness and not to use a rigid "benchmark" to reject consideration of controls.
- Averaging Plans: EPA advises the EQB to amend the averaging provisions of proposed Section 129.98 to ensure that averaging plans, including units inside designated nonattainment areas, achieve at least RACT level reductions — excess reductions from outside any designated nonattainment area boundaries cannot be used to offset emissions above allowable RACT emissions inside any designated nonattainment area boundary.
- Title V Related: For better translation of rule requirements into Title V permits issued to sources subject to this rule, EPA advises the EQB to include affirmative provisions in the rule itself to: (1) mandate that sources not using continuous emissions monitoring systems (CEMS) monitor compliance with periodic stack tests and parametric monitoring; (2) specify that a permit issued pursuant to proposed section 129.98(i) ensure the listing of "each air contamination source" at a Title V facility includes all NO_x emitting sources at that facility; (3) require records be retained for at least 5 years; and (4) incorporate in Section 129.98 to: (a) identify what changes will mandate a change to the RACT averaging permit; (b) include actual start-up and shut-down emissions in compliance demonstrations; and (c) use the term "operating permit" and "operating permit modification" consistently.
- EPA recommends other minor editorial changes for clarity.

The extensive EPA comments provide a detailed explanation of their concerns with the proposed regulation, including supporting data. The EPA comments include strong warnings that the proposed regulation is not acceptable to them. The comments state that the EQB's proposed limits are "too lax," that lower emission limits are technologically feasible, and that the EQB needs to re-examine the proposed limits.

Based on EPA's comments, it does not appear that the proposed regulation will be viable as a SIP revision. We recommend that the EQB meet with the EPA to gain a thorough understanding of their concerns and how to successfully address them. In the final-form regulation submittal, the EQB should explain how the revised regulation addresses each issue raised in the EPA comments and constitutes a viable SIP revision.

Other States Affected by Pennsylvania's SIP Revisions

Comments were submitted by the respective environmental departments of the neighboring

states of Delaware, Maryland and New Jersey, as well as by Connecticut. They all state they are affected by Pennsylvania's emissions. These comments are consistent in their positions that Pennsylvania's regulation:

- Should require sources to run their already installed controls;
- Should adopt more stringent emission rates as other states have already done;
- Should amend the deficient averaging mechanism; and
- Should amend emission limits for municipal waste combustors because they are not RACT.

These comments also note that the Ozone Transport Commission suspects that many electric generating units in Pennsylvania are equipped with air pollution control equipment but do not appear to operate it during the ozone season. The EQB should explain how the final regulation will ensure that Pennsylvania is adequately addressing emissions under its jurisdiction so that we are properly meeting our pollution control responsibilities to other states.

Discrepancy Regarding Other States' Regulations

In Regulatory Analysis Form (RAF) Question 12, the EQB states that the proposed regulations are "similar to regulations already adopted by Wisconsin and New York and approved by the EPA." However, Delaware (Delaware comments, page 3) and Connecticut (Connecticut comments, page 2) both commented that New York has in place significantly more stringent emissions limits than Pennsylvania. The EQB should either support or amend its response to RAF Question 12.

Scope of and costs imposed by the regulation

Several commentators stated that the estimated number of sources affected by the regulation is significantly understated in the RAF. Commentators also believe the compliance costs are understated in the RAF. For example, some commentators believe the regulation would affect an entire class of turbines that cannot be retrofitted and the owners would have to apply for alternatives. The EQB should review these numbers and in the final regulation submittal provide support for the number of sources affected and compliance cost estimates included in the RAF.

2. Section 121.1. Definitions. – Clarity; Need.

CEMS – Continuous Emissions Monitoring System

The word "permanent" was added to this definition so that the CEMS would "provide a permanent record of emissions." Commentators question the relationship of the word "permanent" to record retention which is five years. We question the need for the addition of the word "permanent" in this definition and recommend deleting it.

Stationary internal combustion engine

The proposed regulation deletes the limitation of this definition to Section 129.203. Therefore, under the opening language of Section 121.1, the definition would apply to all of Article 3. Commentators believe the amendment would improperly expand the scope of the definition. Why is this amendment necessary and appropriate?

Additional definitions

Various commentators asked that the regulation include additional definitions. The requested definitions include:

- Capacity factor;
- Combustion source;
- Combustion turbine;
- Noncommercial gaseous fuel; and
- Refinery gas.

The EQB should either add these definitions or explain why they are not needed.

3. Section 129.96. Applicability. – Need; Economic impact; Clarity.

Exemptions

Several commentators believe that since they are subject to more stringent requirements under other programs (such as Maximum Achievable Control Technology, National Emission Standards for Hazardous Air Pollutants and New Source Performance Standards) they should be exempt from the RACT requirements. Commentators also note that some facilities have previously undergone RACT review and currently have permitted requirements and/or emissions limits. They questioned why such facilities would have to undergo the RACT process again. While there are some exemptions in the regulation, we do not believe the regulation is sufficiently clear on what sources they apply to. We recommend that the EQB consider whether additional exemptions are needed to accommodate facilities that are already subject to more stringent requirements or have already completed a RACT process.

Sources meeting a previously established standard

Subsections (a) and (b) list circumstances when the additional RACT standards are not applicable “. . . and for which a requirement or emission limitation, or both, has not been established in §§ 129.51 – 129.52c” However, there are other exemptions within the body of the regulation, such as Subsection 129.97(i) which allows a prior RACT permit to remain effective “. . . to the extent the RACT permit contains more stringent requirements or emission limitations, or both.” We found similar exceptions in Subsections (j), 129.99(g) and (k), and 129.100(a). We recommend that the regulation include in Section 129.96 a full list of exceptions

by reference so that the reader can readily determine whether the additional RACT requirements apply to their source.

4. Section 129.97. Presumptive RACT requirements, RACT emission limitations and petition for alternative compliance schedule. – Protection of the public health, safety and welfare; Need; Reasonableness; Economic impact; Acceptable data; Implementation procedure.

Consistency with federal requirements

Several commentators cited examples within Section 129.97 where provisions are either redundant with federal regulations or potentially in conflict with them. The commentators' citations include 40 CFR 63 Subparts ZZZZ, DDDDD and JJJJJ. We recommend that the EQB review the requirements in the final regulation in conjunction with the federal requirements to resolve any redundancy and conflicts.

NOx limits and VOC limits

This section specifies limits for both NOx and volatile organic compounds (VOC). Some commentators questioned on what basis, either economic or technical, these limits constitute RACT. Commentators also questioned whether the controls needed to meet the limits are cost effective. We recommend that the final regulation submittal provide detailed support for the limits specified in the final regulation, an explanation of how they meet RACT standards and how the controls needed to comply are cost effective.

Clarity regarding sources and requirements

Several parties commented that it is unclear which requirements apply to their sources or commented that the provisions are ambiguous. We agree that the requirements set forth in this section are complicated. It is advantageous to both the Department of Environmental Protection (DEP) and the regulated community for the regulation to, as clearly as possible, describe sources and their requirements. We note the following relating to clarity:

- Subsection (a) states that sources listed in subsections (b) - (h) “located at a major NOx emitting facility or major VOC emitting facility, or both, subject to § 129.96 shall comply” This phrase or portions of it are unnecessarily repeated in most of the following subsections (b) – (h).
- Does Subsection (b) provide alternative compliance options or does it apply simultaneously with Subsections (c) to (h)?
- Under Paragraph (b)(1), it is not clear how an adjustment under Subparagraph (i) relating to “fuel burning equipment, including the burners” is a different requirement than Subparagraphs (ii) relating to the “flame pattern” and (iii) relating to the “air to fuel ratio.”
- As written, Subparagraph (b)(1)(i) could be satisfied by just an inspection. Is that the intent?

- As written, Subparagraphs (b)(1)(ii) and (iii) would require an adjustment in all circumstances. What if an adjustment is not needed?
- Paragraph (c)(3) should use the defined term “stationary internal combustion engine.”
- Does Subsection (d) apply in addition to the requirements in the other subsections?
- Why doesn't subsection (d) also include NO_x sources?
- Under Subsection (d), the phrase “other combustion source” is vague.
- Does Subsection (g) apply to the source or the facility?
- Several subsections reference “a source in this subsection.” It would be clearer to state “a source described in this subsection.”

We recommend that the EQB review and amend this section so that it clearly sets forth which sources the provision applies to and what the specific requirements are.

Subsection (b)

A commentator believes the requirement in Paragraph (1) for an annual tune-up is too frequent because under other requirements boilers only need to be tuned up every five years. The EQB should explain why an annual tune-up is needed and reasonable.

A commentator states that the EPA document (EPA-340/1-83-023) referenced in Paragraph (2) does not address modern boilers and control systems. Is this document outdated?

Manufacturer's specifications and good engineering practices

Subsection (c) requires operation “in accordance with the manufacturer's specifications **and** good engineering practices.” Emphasis added. Commentators stated that some older sources have outdated manufacturer's specifications and therefore the source is operated using good engineering practices. Therefore, they cannot simultaneously meet both manufacturer's specifications and good engineering practices. The EQB should review this provision and explain how all sources can meet both manufacturer's specifications and good engineering practices.

Lower limits

The paragraphs under Subsection (c) require compliance, for example, for “(1) A boiler or other combustion source with an individual rated gross heat input less than 20 million Btu/hour.” There is no lower limit specified, implying all sources less than 20 million Btu/hour must comply. In other provisions, such as Paragraph (g)(1) a lower limit is specified. We recommend that the EQB add lower limits to Subsection (c) or explain why they are not needed.

Good engineering practices

The phrase “good engineering practices” is used in both Subsections (c) and (d). A commentator states this phrase is not defined and therefore not readily implemented. We agree that the regulation should define what constitutes “good engineering practices.”

Timeline for compliance

Several commentators representing different industries stated the timelines for compliance specified in Subsections (a) and (k) will be difficult to meet if there is a delay in approval of their RACT plans. They request that the regulation provide longer timeframes or an opportunity to request an extension of these timeframes. In addition, why do the timeframes begin with the date of publication of the final regulation, rather than the date DEP approves an individual plan? The EQB should explain why the timeframes in the regulation are reasonable or provide a request for extension provision in the regulation.

Fuel sources

While Subsection (g) addresses a multitude of fuels, some commentators believe further direction is needed for units that use dual fuels, use different fuels at different times, or use landfill gas rather than natural gas. We ask the EQB to review the list of fuels and add more categories of fuels where appropriate and also provide further direction on what category a dual fuel fired source falls into.

Measurement of clinker production

Subsection (h) provides limits for clinker production. Operators of cement kilns commented that it is complicated for them to calculate a 30-day average because daily clinker production is not directly measured. The EQB should explain how the cement kiln industry can readily comply with the 30-day rolling average for clinker production.

Startup and shutdown of sources

Several commentators asked that the startup and shutdown of their sources be excluded from the 30-day rolling average. They state this has been the past practice. Cement kiln operations commented that they do not produce clinker during startup and shutdown. Should startup and shutdown periods be excluded from the 30-day rolling average?

5. Section 129.98. Facility-wide or system-wide NO_x emissions averaging RACT operating permit modification general requirements. – Protection of the public health, safety and welfare; Need; Reasonableness.

System averaging

A commentator observes that, as written, this section relies on predictive averaging over several sources. The commentator’s concern is that if an owner has to close down a low emission source, mathematically the system-wide average would increase, possibly to the level of noncompliance. The commentator observes that even though the total system-wide emissions

would drop by the amount of the low emission source, the math results in an increased average. The EQB should explain how the regulation reasonably accommodates this circumstance or consider an amendment that would accommodate an unforeseen shutdown of a source.

90% factor

Subsections (d) and (e) specify that on a facility-wide or system-wide calculation the emissions must not be greater than 90% of the sum of emissions calculated on a source-specific basis. Some commentators described this as a 10% penalty for averaging. The EQB should explain why the 90% factor is needed and reasonable.

6. Section 129.100. Compliance demonstration and record-keeping requirements. – Economic impact; Reasonableness.

Compliance demonstration

A commentator is concerned with the compliance demonstration required by Paragraph (a)(2). The commentator did a recent stack test to comply with its existing permit conditions that cost about \$25,000. While we recognize Subsection (c) provides a waiver process, we agree that Paragraph (a)(2) does not directly recognize testing already done to meet existing Title V operating permit test conditions. We recommend that the regulation allow compliance demonstration by submitting test results required by an existing permit, as long as that testing meets other requirements in the regulation.

Commentators also stated that Subsection (a) does not address a source only subject to work practice standards. We recommend adding language describing the recordkeeping requirements for this circumstance.

Permanently bound log book

Subsection (g) requires an operator to record adjustments “in a permanently bound log book or other method approved by the Department” A commentator stated it uses computer records. We recommend updating this requirement to include computerized records.